



# MADISON COUNTY THOROUGHFARE PLAN

STEERING COMMITTEE MEETING 2 & 3



APRIL 25, 2024

# AGENDA

- Project Overview
- Public Engagement Takeaways
  - Stakeholder Meetings
  - Public Input Survey
  - Map.Social
- Safety Plan Overview
- Modeling Madison County
- Next Steps



# INTRODUCTIONS



**Rachel Christenson, AICP**  
HWC Project Manager



**Genevieve Zircher**  
HWC Planner



**Amanda Johnson, PE, PTOE**  
EMCS - Traffic Analysis



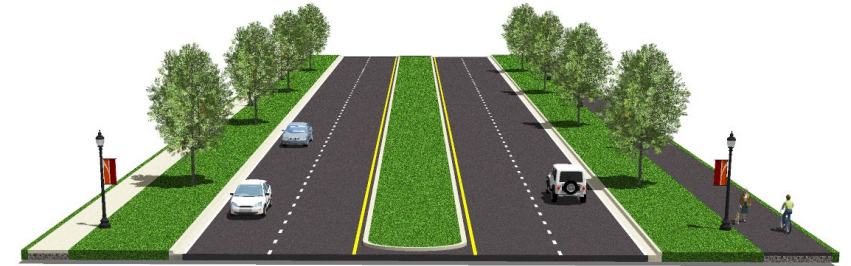
**Cory Whitesell**  
HWC Director of Landscape  
Architecture & Planning



# PROJECT OVERVIEW

# PROJECT OVERVIEW

- What is a thoroughfare plan?
  - A guiding document which establishes goals, policies, and recommendations regarding the development of a safe, efficient, and balanced transportation system to support Madison County's future needs.
- What is the purpose of the plan?
  - Evaluate the existing conditions in Madison County.
  - Establish a clear vision and goals for the future.
  - Identify recommendations that translate the vision and goals into actionable projects and initiatives.



# PROJECT OVERVIEW

- Vision and Goals
  - Develop a long-term vision for Madison County roadways.
  - Maintain consistent expectations in all communities.
  - Ensure cohesion between communities and the county.
  - Promote seamless and easy travel across the county.
  - Enhance connection between Madison County and neighbors.
  - Monitor the I-69 corridor and the impression it gives.
  - Prioritize public safety.



# PUBLIC ENGAGEMENT TAKEAWAYS

# STAKEHOLDER MEETINGS

3 meetings  
20 participants

- County roads need to be wider to accommodate emergency vehicles, school buses, farm equipment, and semi-truck traffic.
- Legal right-of way needs to be established along county roads so that future roadway improvements can feature expanded lane widths and shoulders.
- There are several dangerous intersections throughout the county where a roundabout or other safety implements may be needed to prevent accidents.
- More connections are needed throughout the county to promote safe, quick, and convenient travel, especially over the White River and to/from I-69.



213  
responses

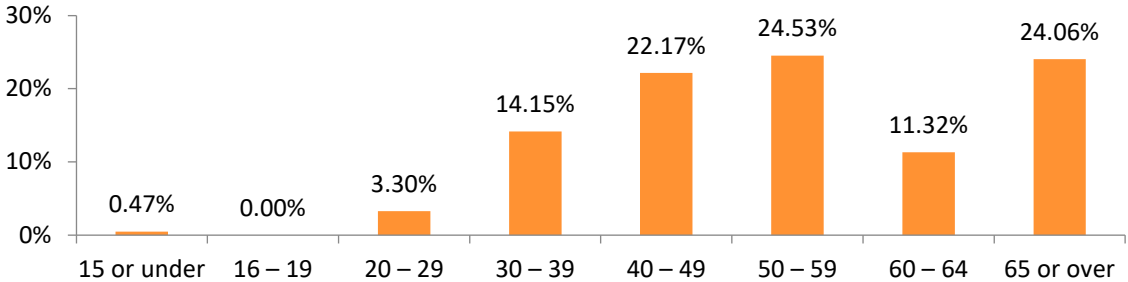
# PUBLIC INPUT SURVEY

- **Q1: Where do you live?**

- Respondents were from communities all over Madison County.
  - 36% were from Pendleton and 30% were from Anderson.
  - Some responses came from neighboring counties – Hamilton, Delaware, Hancock.

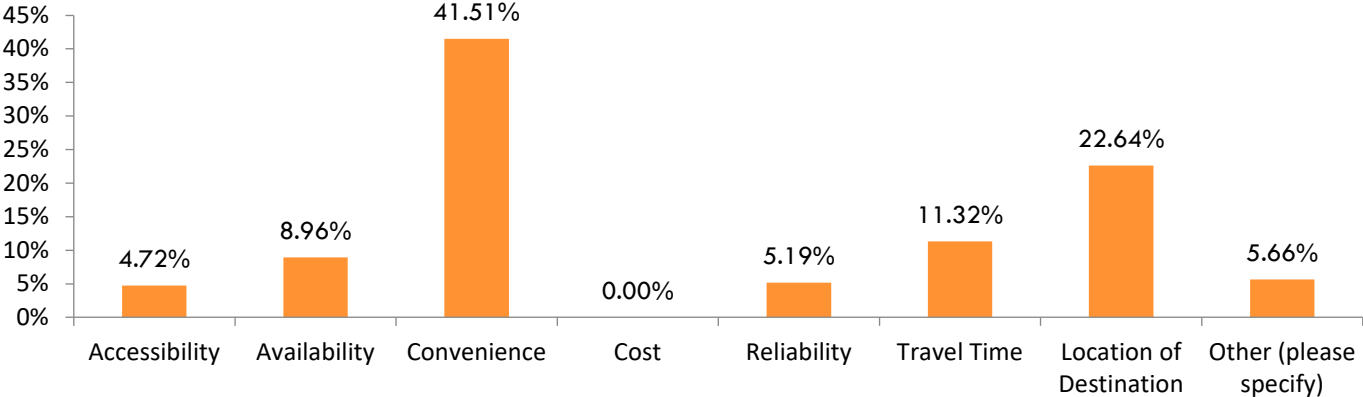
- **Q2: Which category includes your age?**

- 96% of survey respondents were over the age of 30.
- 47% were between the ages of 40 and 59.



# PUBLIC INPUT SURVEY

- **Q3: What is your primary form of transportation?**
  - Most participants (97%) use a car as their primary form of transportation.
- **Q4: What best determines why you use the primary mode of transportation that you use?**
  - 42% of participants choose to drive a car out of convenience.



# PUBLIC INPUT SURVEY

- **Q5: What is your primary destination for transportation from your home?**
  - Work is the primary destination for 63% of survey respondents.
- **Q6: How many miles do you travel to get to work?**
  - Most workers (58%) travel less than 20 miles to the job site.
- **Q7: Which mode of transportation do you wish was more available/accessible or should be improved?**
  - 50% of respondents want biking and walking to be more accessible.
  - 17% wanted to see improvements to public transportation.
  - 16% wanted to see improvements for cars/motorized vehicles.



# PUBLIC INPUT SURVEY

**Q8: Please rate the overall quality of existing transportation infrastructure systems in Madison County.**

  **Bicycle Facilities** – Negative Consensus (62% rated poor or fair)

  **Pedestrian Facilities** – Negative Consensus (59% rated poor or fair)

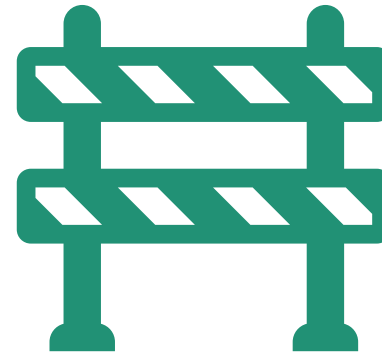
  **Roads and Streets** – No Consensus (36% positive, 22% neutral, 41% negative)

  **Traffic Control (Signs and Signals)** – Positive Consensus (42% rated excellent or good)

# PUBLIC INPUT SURVEY

**Q9: In your opinion, what will be the three most significant transportation challenges in Madison County over the next 25 years?**

- Aging and deteriorating infrastructure
  - Selected by 75% of respondents
- Increasing traffic/congestion/delay
  - Selected by 58% of respondents
- Safety
  - Selected by 29% of respondents



# PUBLIC INPUT SURVEY

## Q10: Which of the following options do you feel will best improve the transportation system in Madison County?

- Improve existing roadways through expansion and redesign
  - Selected by 31% of respondents
- Invest in maintenance of existing roadways
  - Selected by 30% of respondents
- Create greater connectivity and safety for walking and biking
  - Selected by 22% of respondents



# PUBLIC INPUT SURVEY

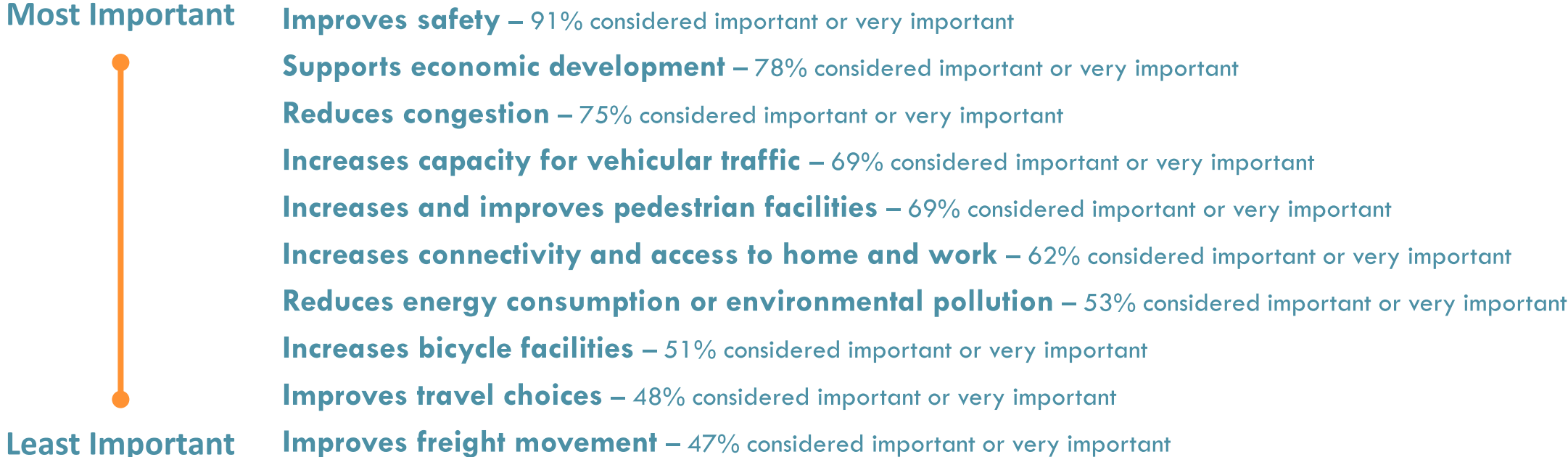
## Q11: During what time of day do you find it hardest to travel?

- Most respondents (68%) find it hardest to travel during the late afternoon from 3pm to 6pm.
- 19% don't find it difficult to travel in Madison County.



# PUBLIC INPUT SURVEY

## Q12: What criteria should be a priority when selecting transportation projects?





# PUBLIC INPUT SURVEY

**Q13: Please rank the following projects based on how important they are to you.**

**Most Important**



- Maintaining existing streets and roadways
- Safety improvements on existing streets
- Greenways/multi—use paths
- Building new streets and roadways
- Improvements in street appearance (trees, lights, landscaping)
- Sidewalks
- Greater access to Interstates
- On-street bike lanes

**Least Important**

# PUBLIC INPUT SURVEY

## Q14: What other comments or suggestions do you have related to transportation within Madison County?

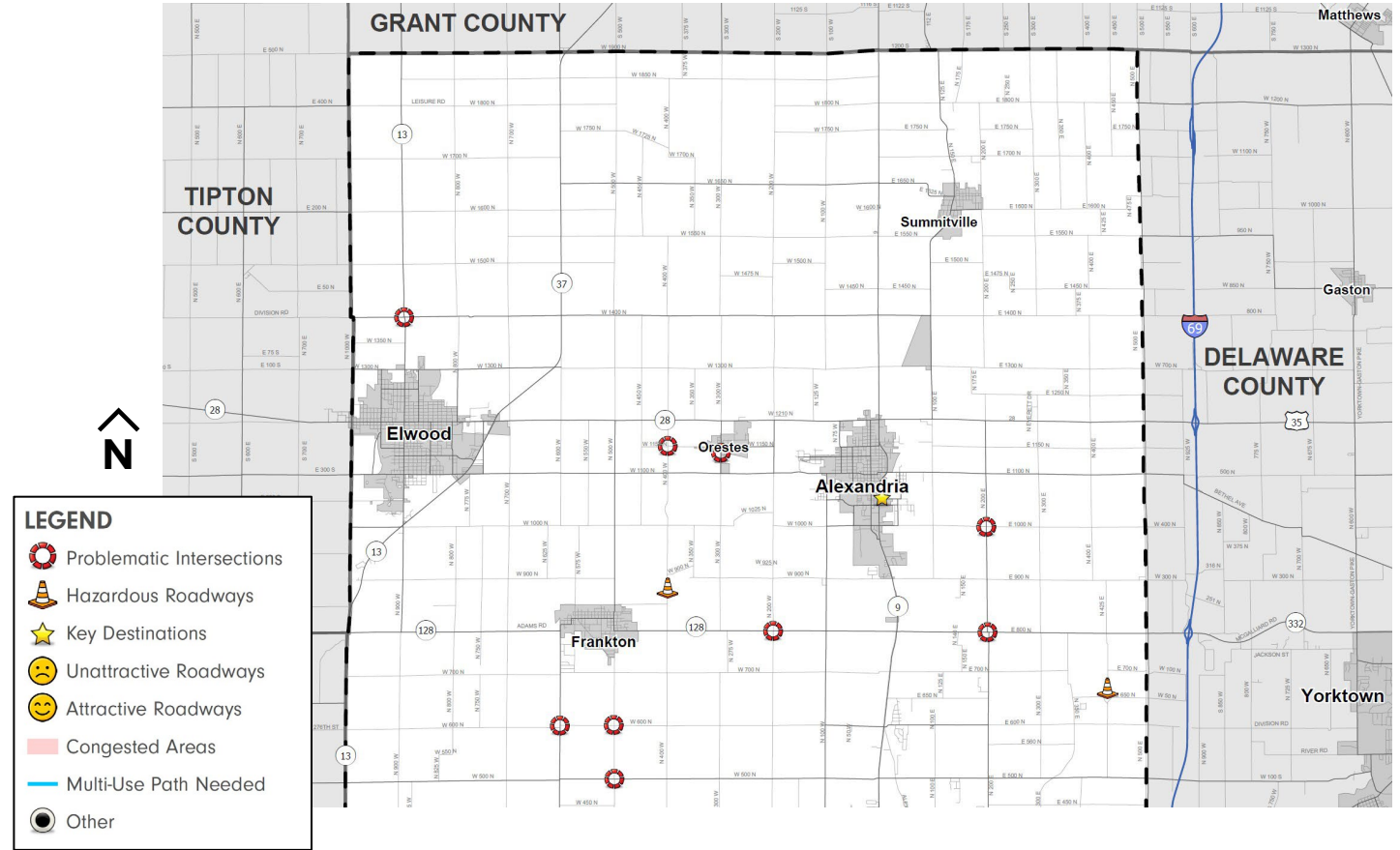
- “Make this county a **biking destination.**”
- “You should be able to walk or bicycle safely to the grocery, store, doctor’s office, etc. Many of the places are located on busy streets that have no sidewalks or crosswalks.”
- “We lack greenspace and beautification or any decent trail like Indy and Hamilton County have. **We continue to fall behind** and do not offer our residents enough reason to stay.”
- “It’s very important to provide expanded public transportation options for the county.”
- “County highways are **too narrow.**”
- “Rural roads need to be improved for better transportation of one of the most important economic opportunities: agriculture.”
- “Consider **roundabouts** in high traffic and congested intersections.”
- “Fix what you have.”

# MAP.SOCIAL ACTIVITY

63  
Comments

## North Madison County

- 9 Problematic Intersections
  - Most located on county roads
  - 3 at NS railroad crossings
- 2 Hazardous Roadways
  - N 400 W – Hill
  - N 425 E - Curve
- 1 Key Destination
  - Beulah Park in Alexandria



# TIPTON COUNTY

Summitville

Elwood

Orestes

Alexandria

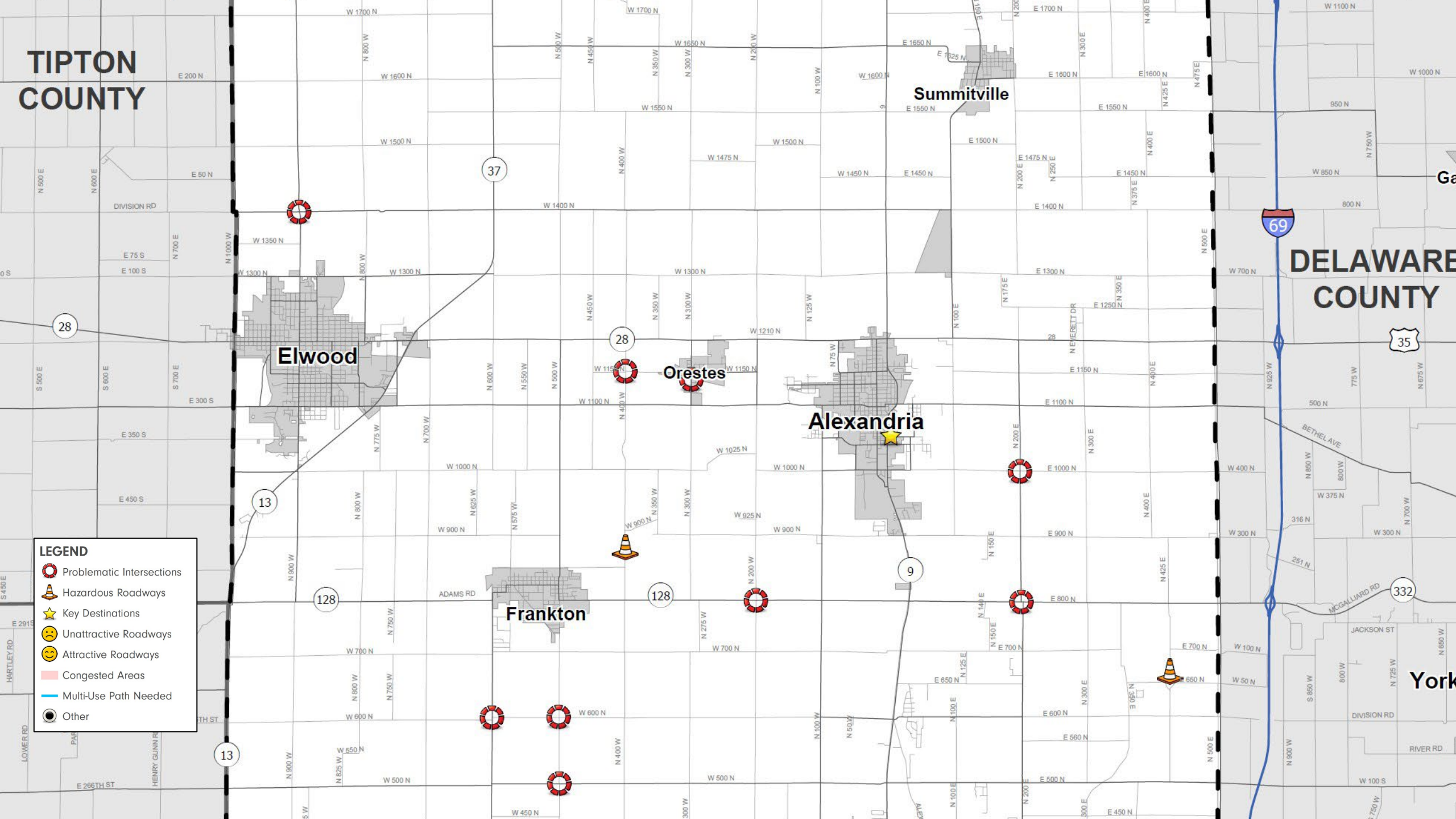
Frankton

# DELAWARE COUNTY

York

**LEGEND**

- Problematic Intersections
- Hazardous Roadways
- Key Destinations
- Unattractive Roadways
- Attractive Roadways
- Congested Areas
- Multi-Use Path Needed
- Other



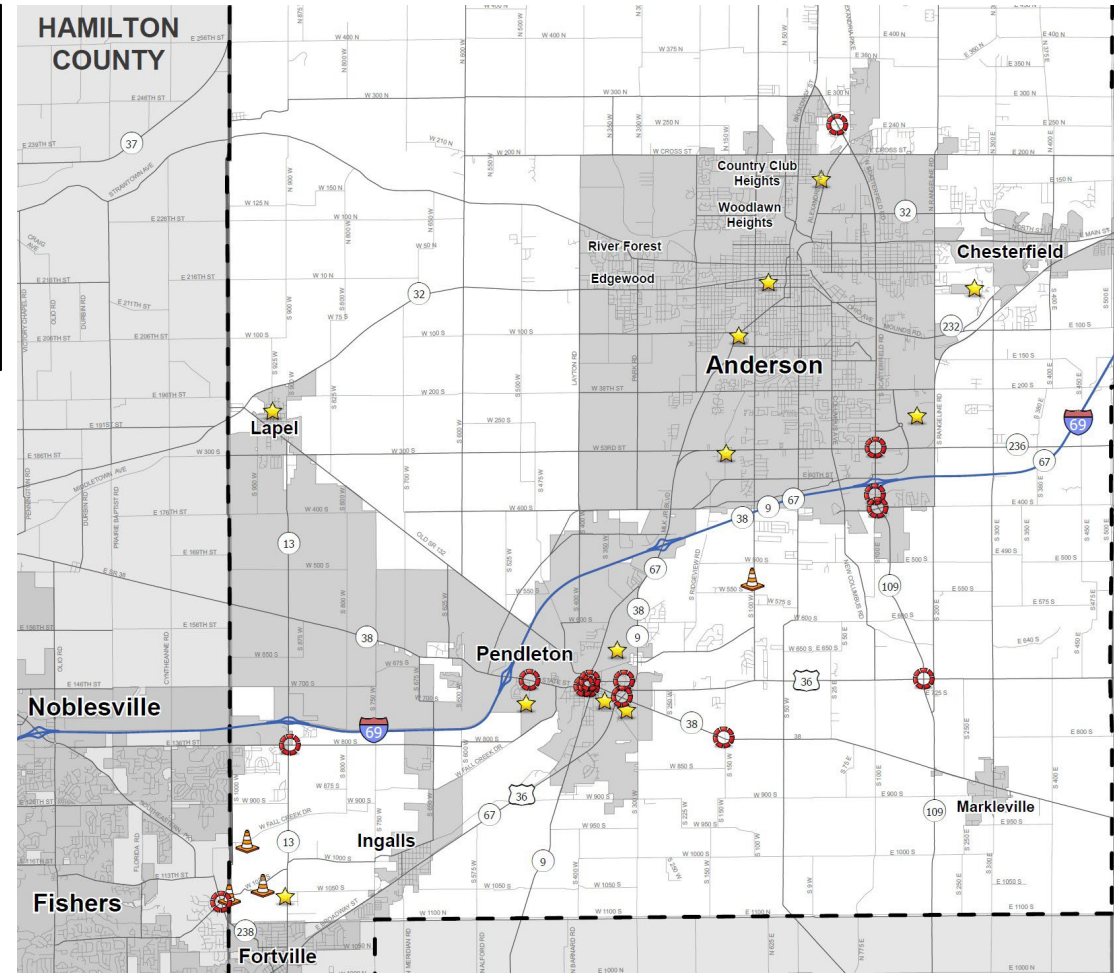
# MAP.SOCIAL ACTIVITY

## South Madison County









- 13 Problematic Intersections
  - Along State Street in Pendleton
  - Along Scatterfield Road in Anderson
  - Along SR 38
- 3 Hazardous Roadways
  - S 100 W
  - W 1025 S
  - Fall Creek Drive
- 12 Key Destinations
  - Parks – Mounds State Park, Shadyside Park, Falls Park, Green Township Community Park
  - Schools – Anderson University, Pendleton Heights Middle School and High School, Pendleton Elementary School
  - Entertainment – Uranus Fudge Factory, Harrah's Hoosier Park, Anderson Speedway, Restaurants
  - Health – Community Sports and Wellness Center

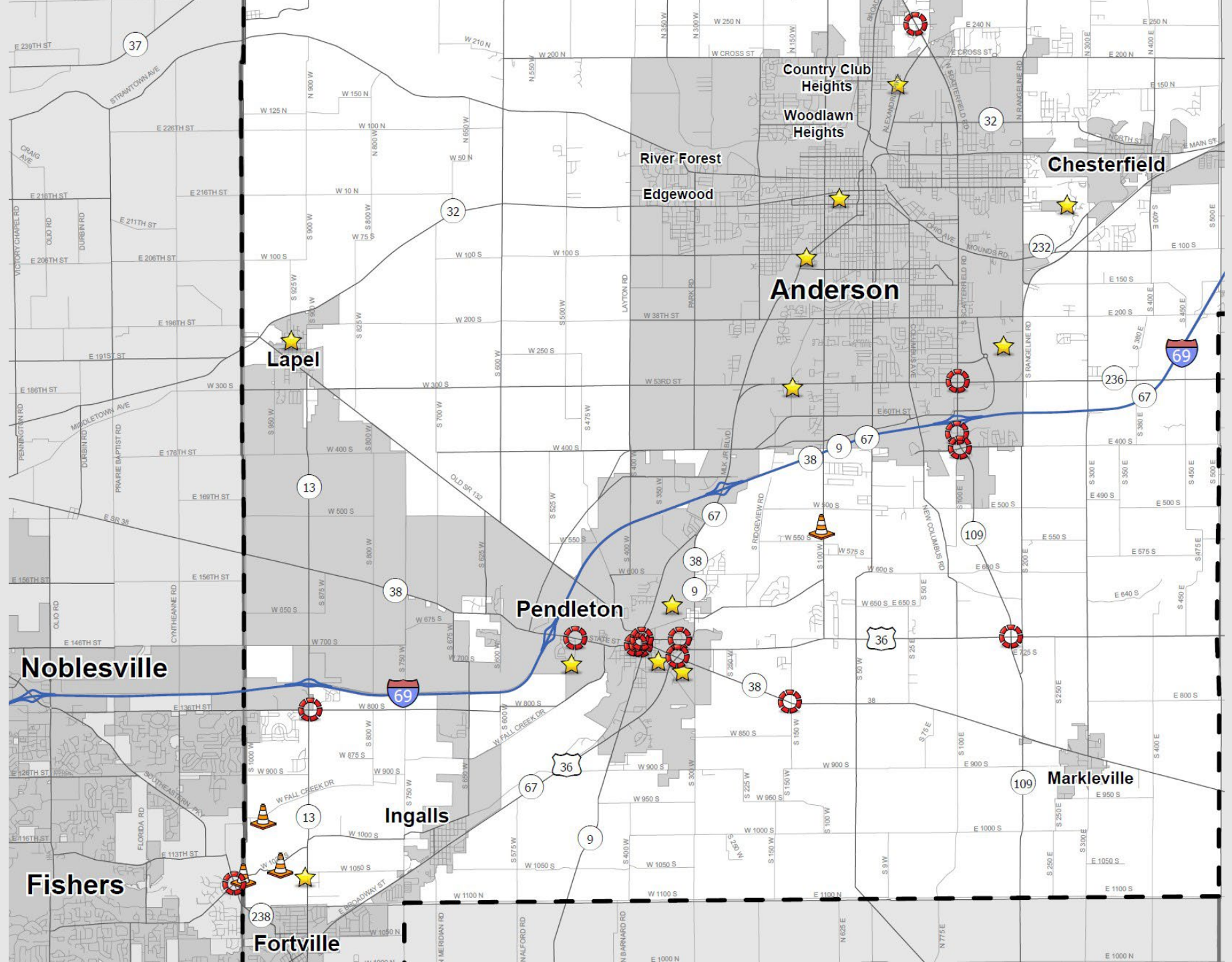
**LEGEND**

- Problematic Intersections
- Hazardous Roadways
- Key Destinations
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**LEGEND**

-  Problematic Intersections
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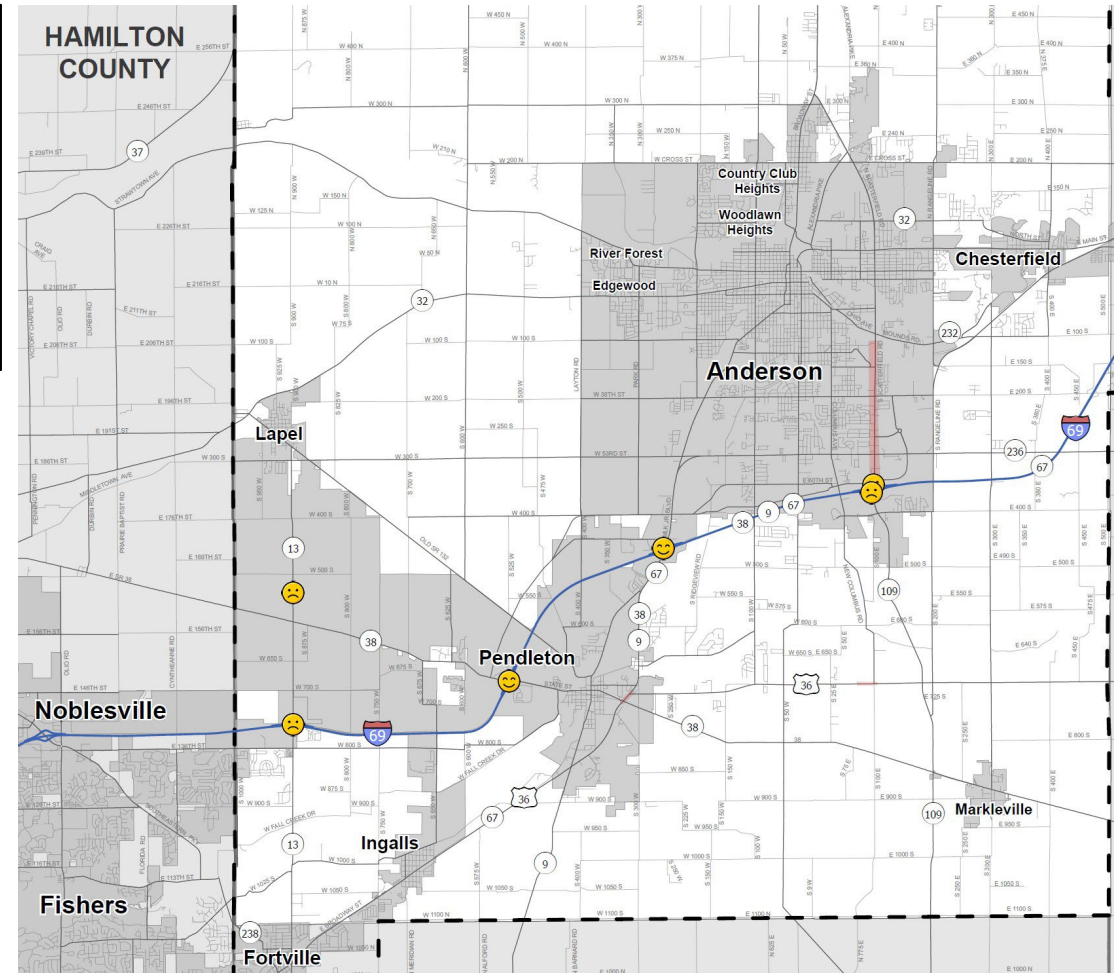
# MAP.SOCIAL ACTIVITY

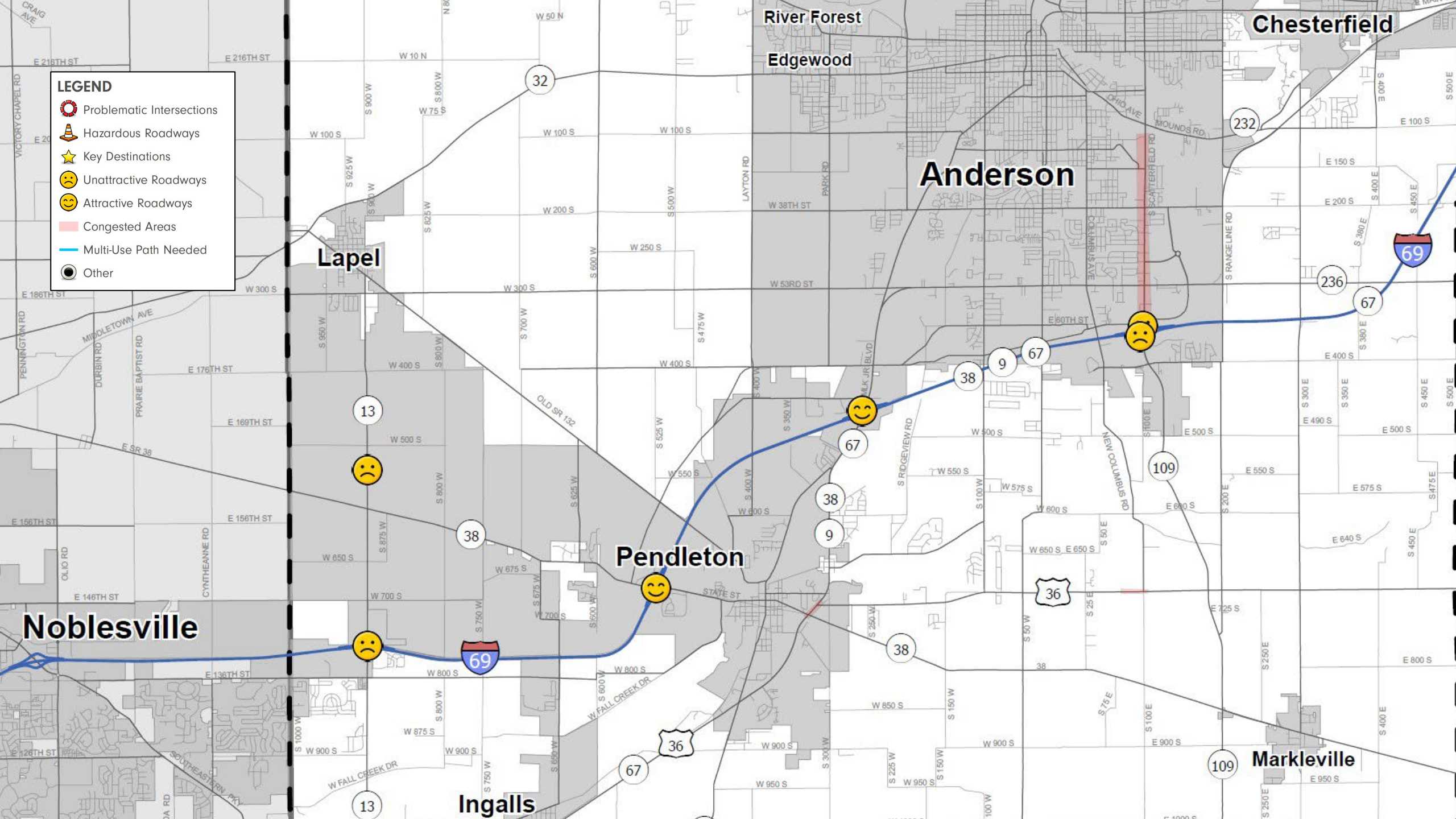
## South Madison County

- 3 Unattractive Roadways
  - Exit 226 (Anderson) off I-69
  - Exit 214 (Fortville/Ingalls) off I-69
  - SR 13
- 2 Attractive Roadways
  - Exit 222 (Anderson) off I-69
  - Exit 219 (Pendleton) off I-69
- 4 Congested Areas
  - State Street congestion in Pendleton
  - U.S. 36/SR 67 congestion in Pendleton
  - East Elementary School onto U.S. 36
  - Scatterfield Road congestion in Anderson

**LEGEND**

- Problematic Intersections
- Hazardous Roadways
- Key Destinations
- Unattractive Roadways
- Attractive Roadways
- Congested Areas
- Multi-Use Path Needed
- Other





**LEGEND**

- Problematic Intersections
- Hazardous Roadways
- Key Destinations
- Unattractive Roadways
- Attractive Roadways
- Congested Areas
- Multi-Use Path Needed
- Other

Noblesville

Lapel

Pendleton

Anderson

Chesterfield

Markleville

Ingalls

River Forest

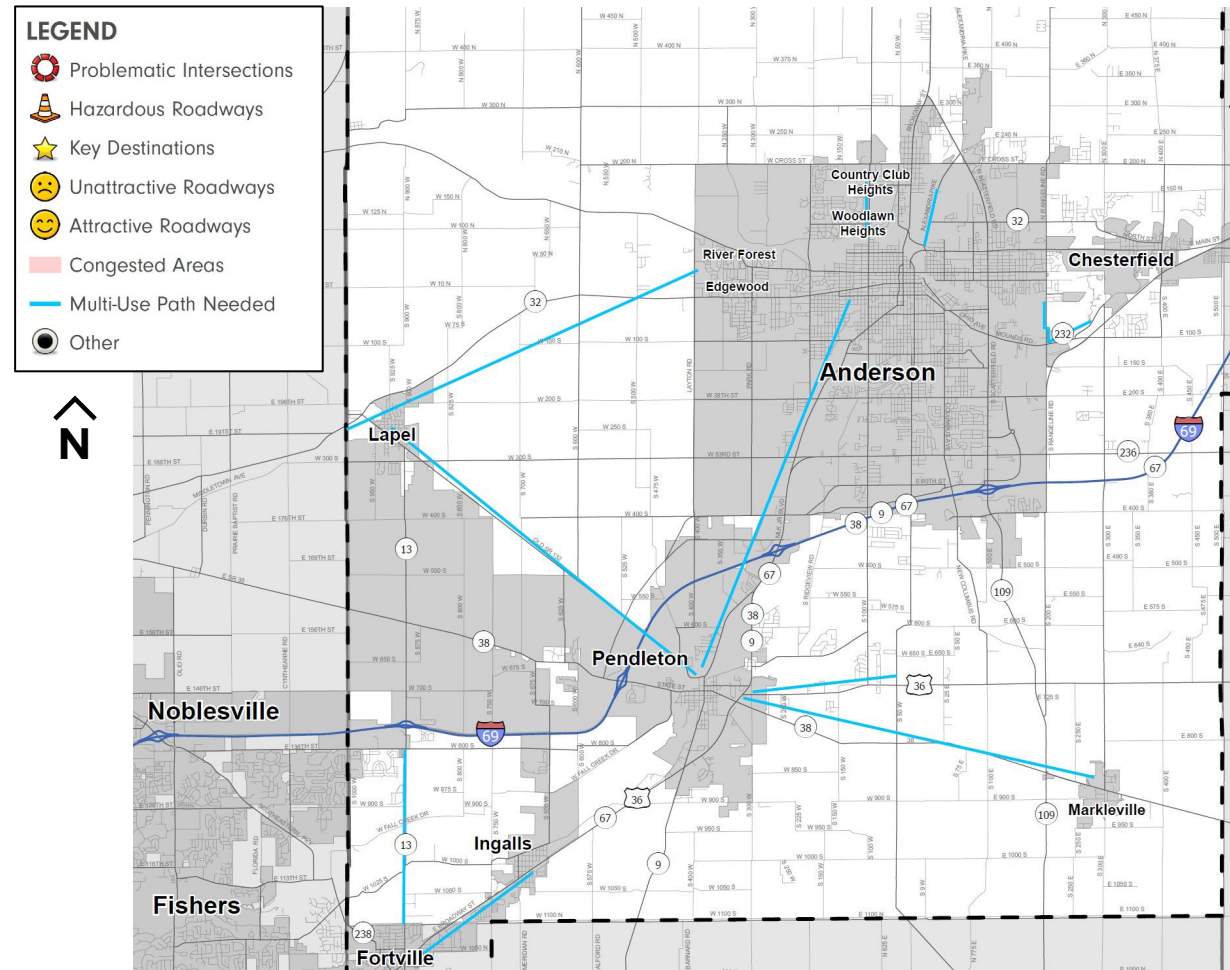
Edgewood











# MAP.SOCIAL ACTIVITY

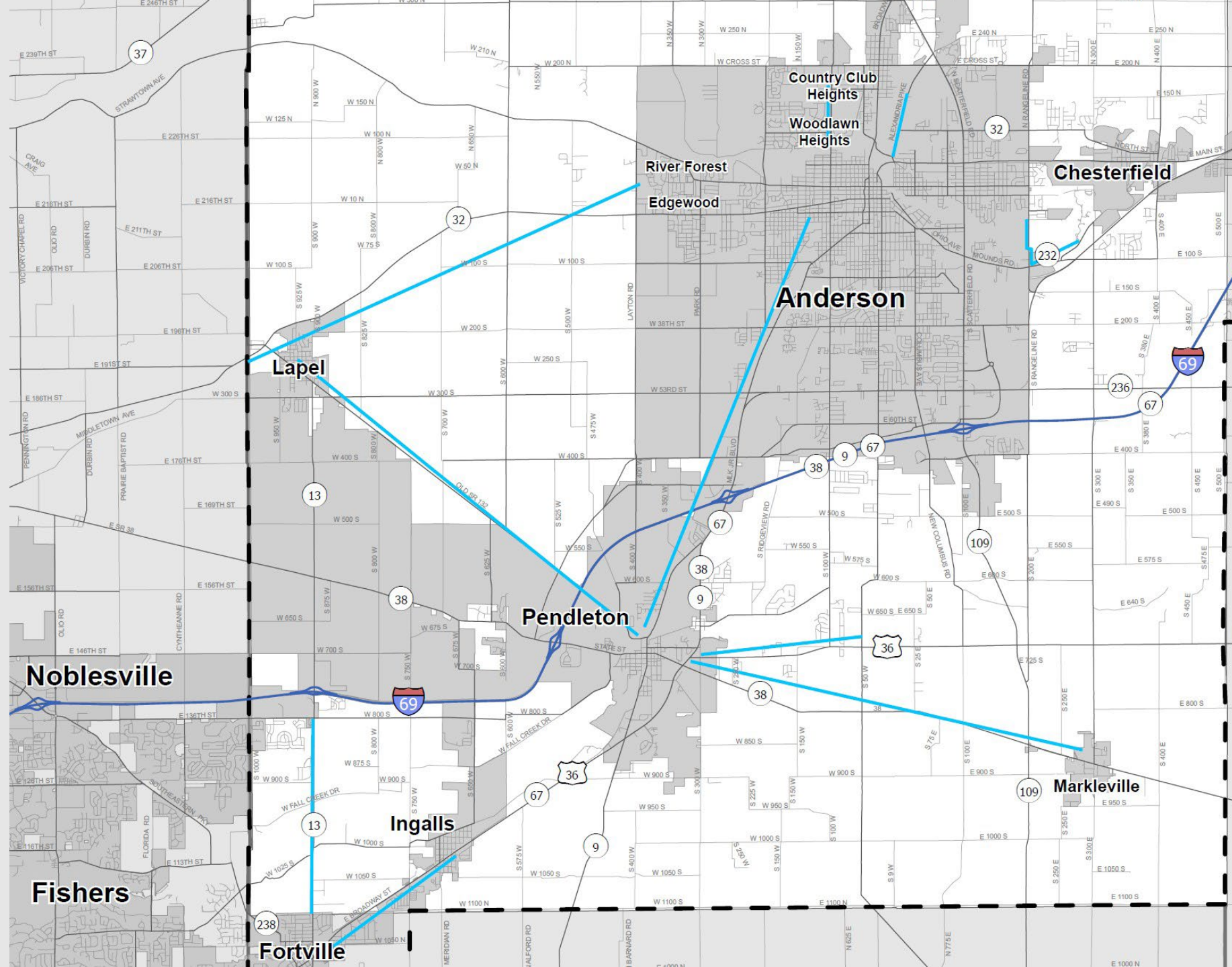
## South Madison County

- 10 Multi-Use Paths Needed
  - Pendleton to Anderson along the CSX railroad line
  - Pendleton to Lapel along Old IN-132
  - Pendleton to Markleville
  - Lapel to Edgewood to White River Trail
  - Community Hospital to White River Trail
  - Anderson University to Shadyside Park
  - Mounds State Park to Rangeline Nature Preserve
  - Fortville to Ingalls
  - Fortville to Summerlake Subdivision
  - U.S. 36 into Pendleton



**LEGEND**

-  Problematic Intersections
-  Hazardous Roadways
-  Key Destinations
-  Unattractive Roadways
-  Attractive Roadways
-  Congested Areas
-  Multi-Use Path Needed
-  Other



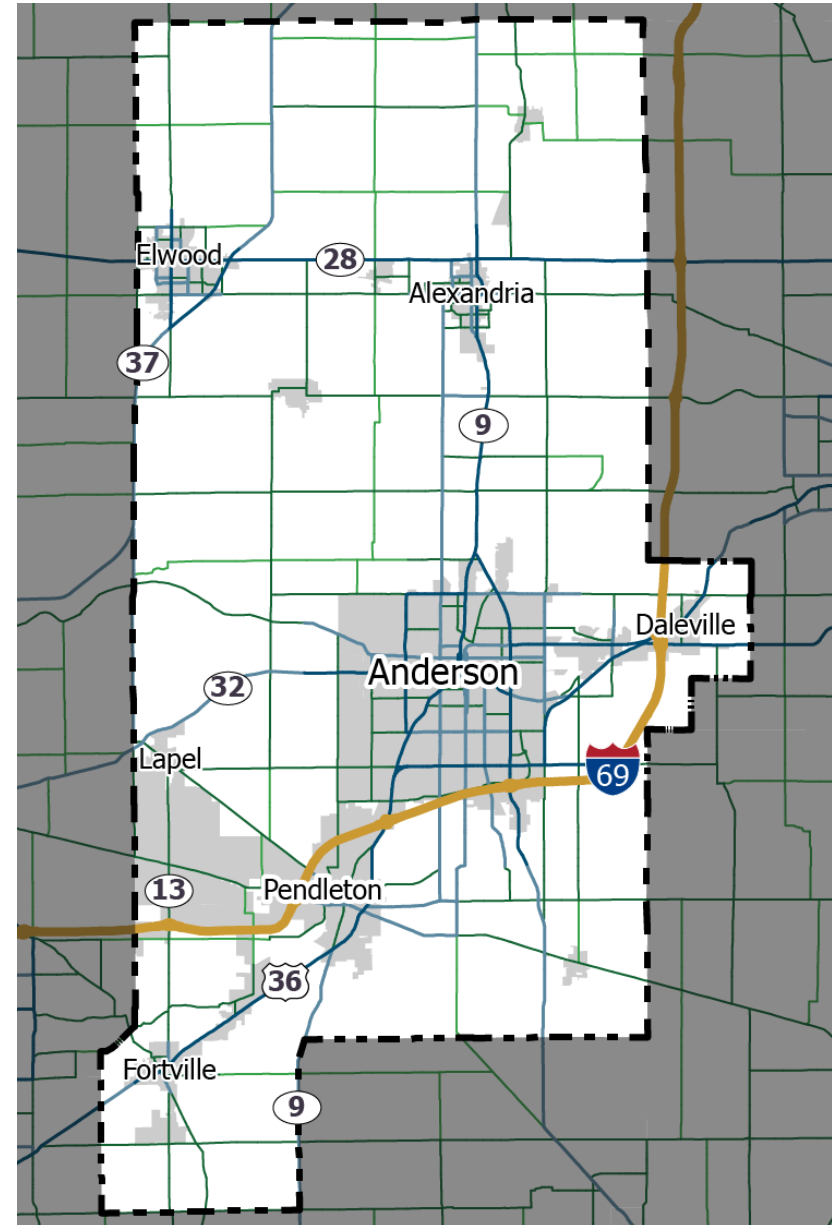


PROTECT  
2030

# SAFETY PLAN OVERVIEW

# SAFETY DATA

- 2018, 2019, & 2020
  - Completely audited locations
  - Referenced with roadway inventory
  - Parking lot crashes removed
- 10,555 crashes
- 51 fatalities
- 2,296 injuries



# VISION & TARGET

Adopts a vision zero approach:

We envision a transportation system free of deaths & life-changing injuries.

Sets an initial target:

Reduce fatalities & incapacitating injuries by 5% compared to 2015-2019 averages.

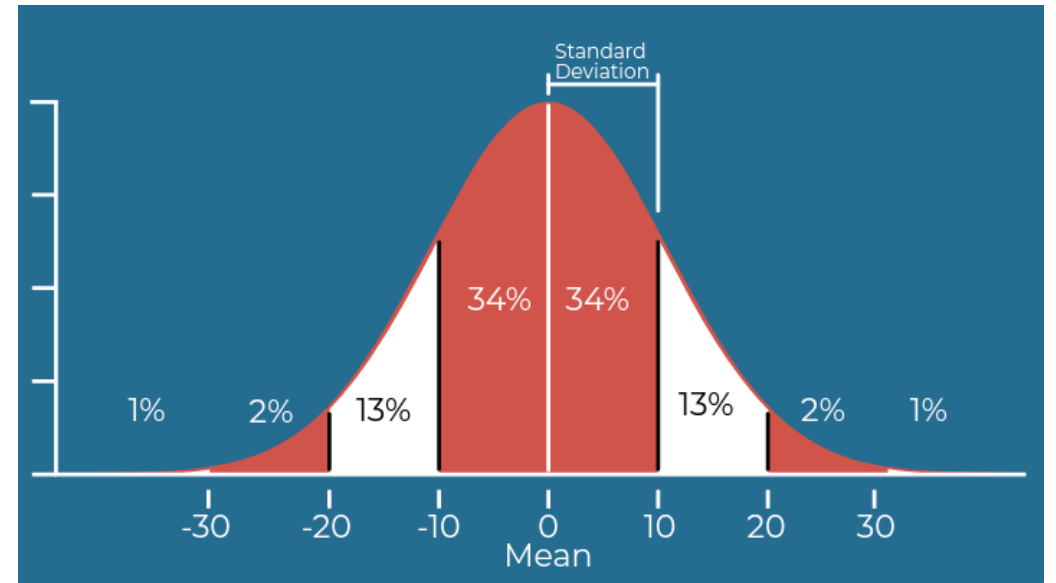
# SUMMARY REVIEW

Emphasis Areas			
Vulnerable Users	Pedestrians	—————	14.1x more likely to be severe
	Motorcycle	—————	9.2x
	Bicycle	—————	7.5x
	Age 65 Plus	—————	2.0x more likely to be fatal
Roadway Design	Rural roadway departures	—————	2.4x
	Rural curves	—————	2.2x
	Urban intersections	—————	70% of severe urban at or near intersections
	Two-way stop control	—————	1.2x
Behaviors	Impaired driving	—————	16.2x more likely to be fatal
	Safety equipment use	—————	9.4x
	Speeding	—————	1.5x
	Distracted driving	—————	1.5x
Post-Crash Care	Rural response time	—————	~5.5 mins longer than non-rural severe
	Overnight response time	—————	2.4x greater than 10 mins @ 3-6 AM

# NETWORK SCREENING

## Identifying high-crash locations

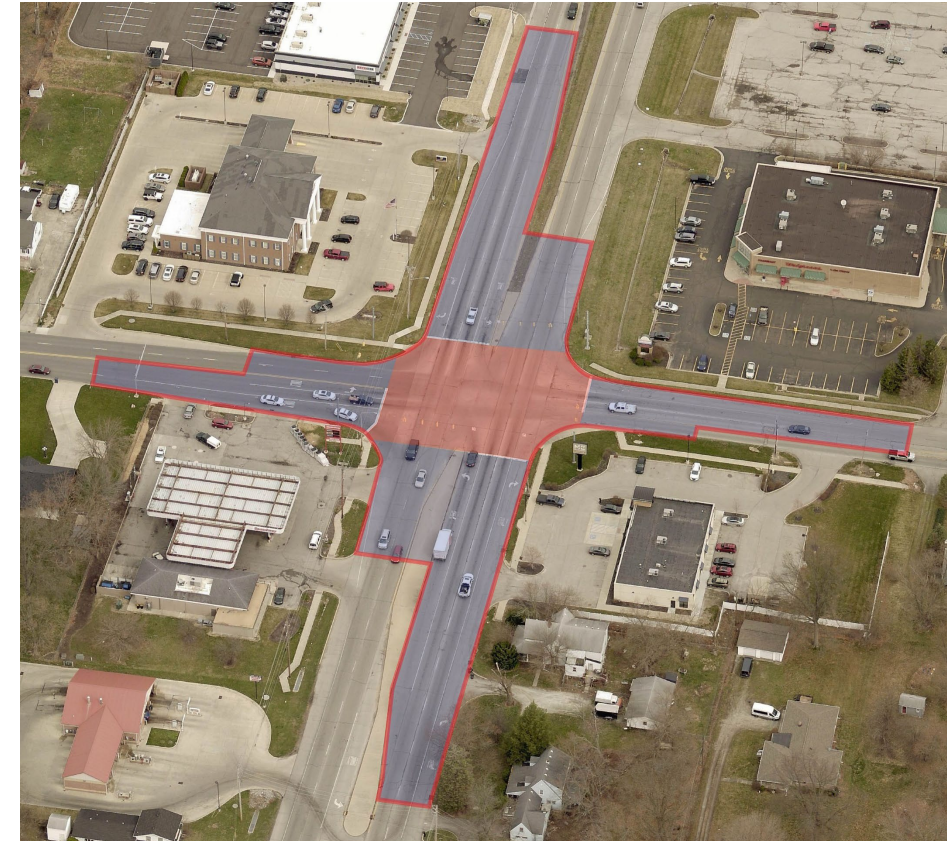
- Frequency
- Severity – Equivalent property damage only (EPDO)
- Rate (risk exposure)
  - Segment – vehicle miles traveled
  - Intersection – total entering volume
- **Variability**
  - Index of crash frequency (ICF)
  - Index of crash cost (ICC)



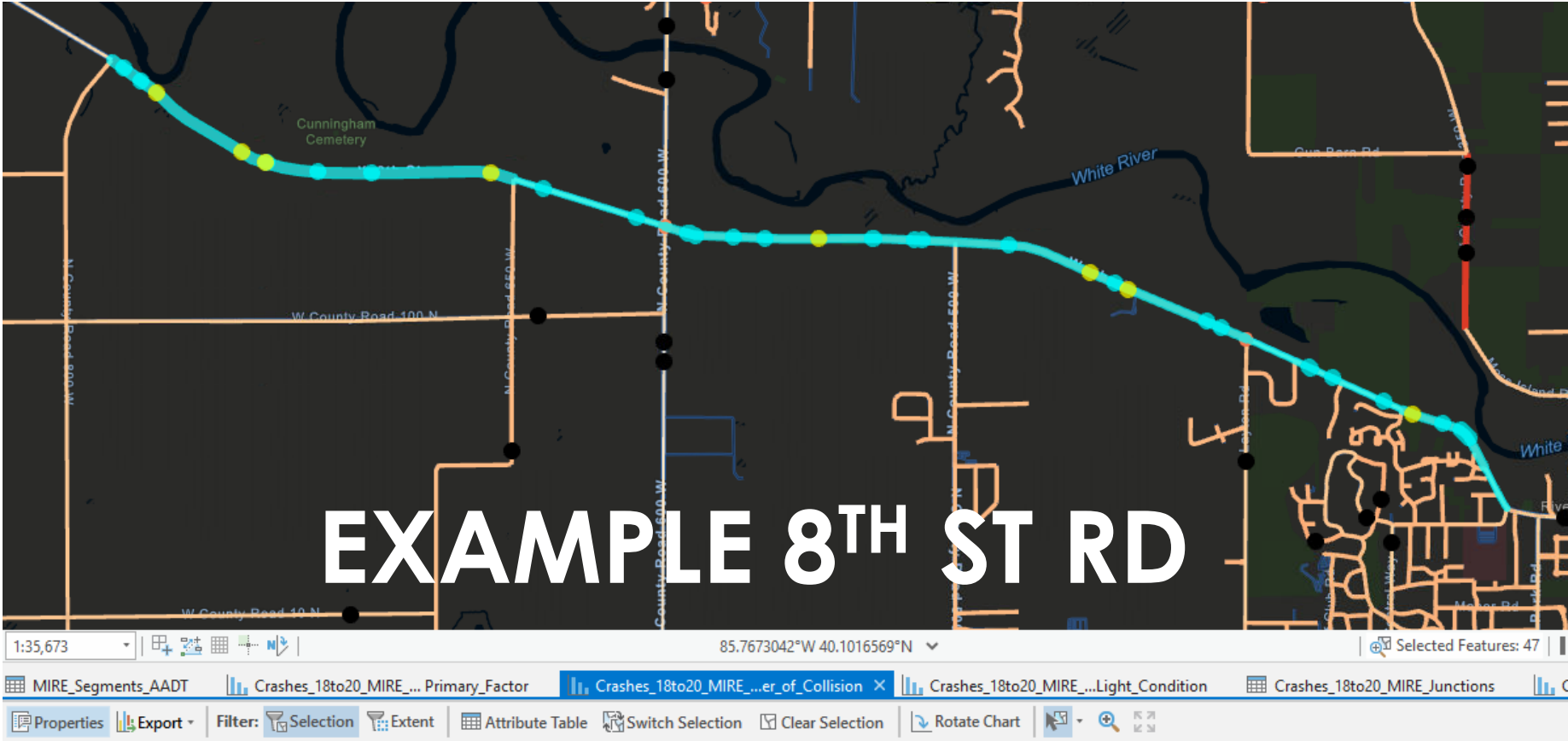
# NETWORK SCREENING

## Identifying high-crash locations

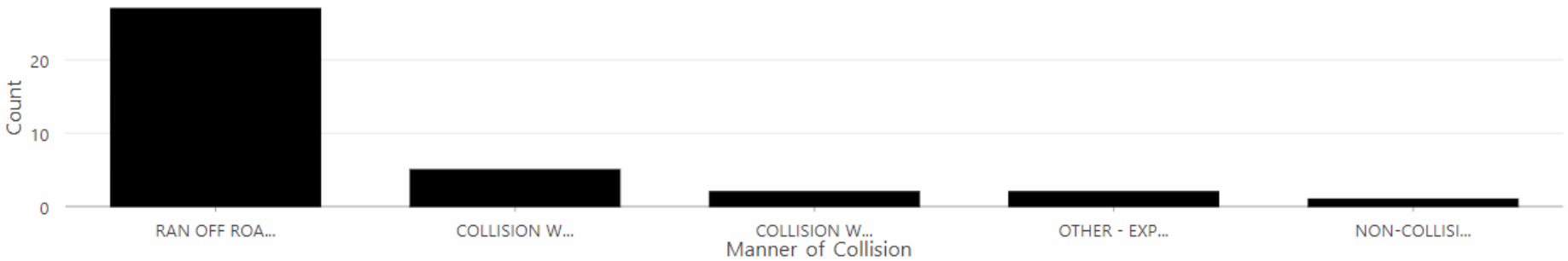
- Local
  - Signalized
  - Unsignalized
  - Segments
- State-owned
  - Signalized
  - Unsignalized
  - Segments
  - Interchanges
- At-Grade Railroad crossings







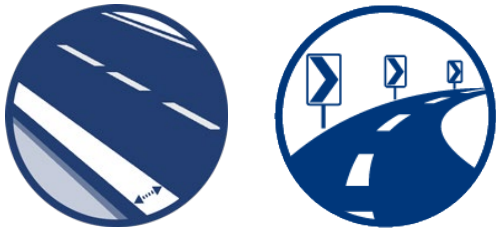
Comparison of data counts by Manner\_of\_Collision



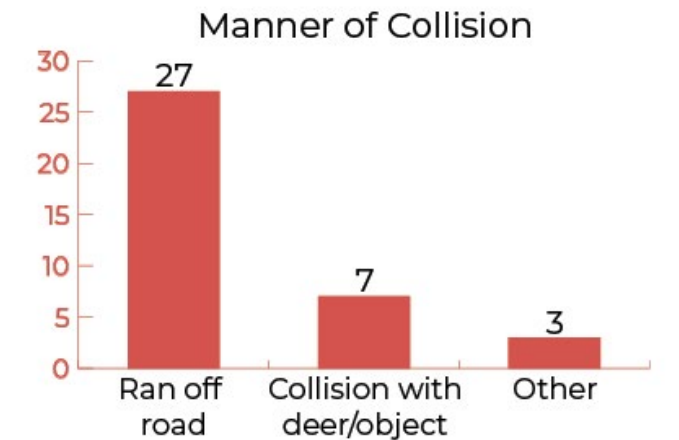
# EXAMPLE ENHANCEMENTS

## Low-cost Improvements

- Enhanced signage (chevrons)
- Sequential dynamic chevron warning system
- Dynamic speed feedback at curves
- Wide edge lines



Emphasis Areas	
Vulnerable Users	Yes
Roadway Design	Yes
Behaviors	Yes
Post-Crash Care	Yes



# EXAMPLE PROGRAM

RSA Coordination – conducting site safety reviews

1. Identify high-crash location (on-going network screening)
2. Initiate discussion with LPA/MPO
  - Select RSA team
  - Planning, engineering, enforcement, emergency response, etc.
3. Conduct pre-audit meeting
  - RSA team prepares data
4. Coordinate on-site review
5. Prepare report with recommendations
6. LPA prepares formal response with next steps



# MADISON CO – TWSC

Intersection	Major AADT	Minor AADT	Crashes	K	A	ICF	ICC
CR 200 W / Florida Rd & CR 500 N	925	624	8	0	5	2.02	2.06
CR 100 W & CR 600 N	1,770	651	5	0	4	0.97	1.69
CR 900 W & CR 500 N	210	204	3	0	3	1.37	1.66
CR 500 W & CR 500 N	1,084	624	4	1	2	0.93	1.48
CR 200 W / Florida Rd & CR 600 N	925	885	5	0	3	1.16	1.47
CR 400 W / Layton Rd & CR 100 S / 25th St	1,175	722	3	0	2	0.86	1.40
CR 100 S & CR 500 W	425	387	4	0	2	1.40	1.28
CR 1000 N & CR 500 W	1,823	269	3	0	2	0.67	1.12
CR 800 N & CR 500 E	4,049	207	7	0	2	1.58	1.03
CR 1250 N & CR 300 E	207	163	1	0	1	0.88	0.96

# MADISON CO – SEGMENTS

Road	Termini		AADT	Crashes	K	A	ICF	ICC
8th St Rd	CR 800 W	CR 650 W	1,446	9	1	3	1.30	1.69
CR 600 N	Heritage Ln	CR 100 E	754	2	0	2	0.67	1.32
CR 200 S	Rangeline Rd	Gilbert Dr	1,177	5	1	1	1.28	1.25
CR 300 E	CR 800 S	US 36	955	7	0	2	1.65	1.24
Old SR 67	CR 300 E	CR 400 E	5,869	14	0	4	0.65	1.15
CR 100 W	Huntsville Rd	CR 575 S	4,281	3	0	2	0.34	1.14
Ridgeview Rd	CR 550 S	CR 500 S	207	2	0	1	1.09	1.08
CR 280 N	Walnut St	CR 900 W	293	3	0	1	1.19	1.05
CR 500 S	CR 100 W	CR 50 W	170	4	0	1	1.70	0.97
CR 450 E	CR 200 S	CR 150 S	207	2	0	1	1.23	0.97

# MADISON CO – SEGMENTS (cont'd)

Road	Termini		AADT	Crashes	K	A	ICF	ICC
CR 200 W	CR 700 N	SR 128	925	8	0	1	2.08	0.97
CR 1000 N	CR 450 W	CR 400 W	153	2	0	1	1.16	0.96
CR 1500 N	CR 700 W	SR 37	40	1	0	1	0.74	0.96
Surrey Dr	Carriage Ln	Surrey Ln	169	1	0	1	0.75	0.96
CR 750 W	SR 128	CR 900 N	53	1	0	1	0.69	0.96
CR 1000 N	CR 400 W	CR 350 W	153	1	0	1	0.66	0.95
CR 300 N	CR 300 W	CR 200 W	207	4	0	1	1.55	0.95
CR 300 E	CR 1000 S	CR 950 S	193	1	0	1	0.60	0.95
CR 475 E	CR 200 S	CR 475 E	170	1	0	1	0.59	0.95
CR 100 S	CR 400 E	County Line Rd	170	3	0	1	1.27	0.94

# SAFETY PLAN OVERVIEW

For more information / updates, check:

[Protect 2030 Hub](#)

**Ryan Phelps, AICP, PTP, RSP1**

Madison County Council of Governments

Principal Transportation Planner

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SPEED  
LIMIT  
45

# MODELING MADISON COUNTY



# MPO MODEL OVERVIEW

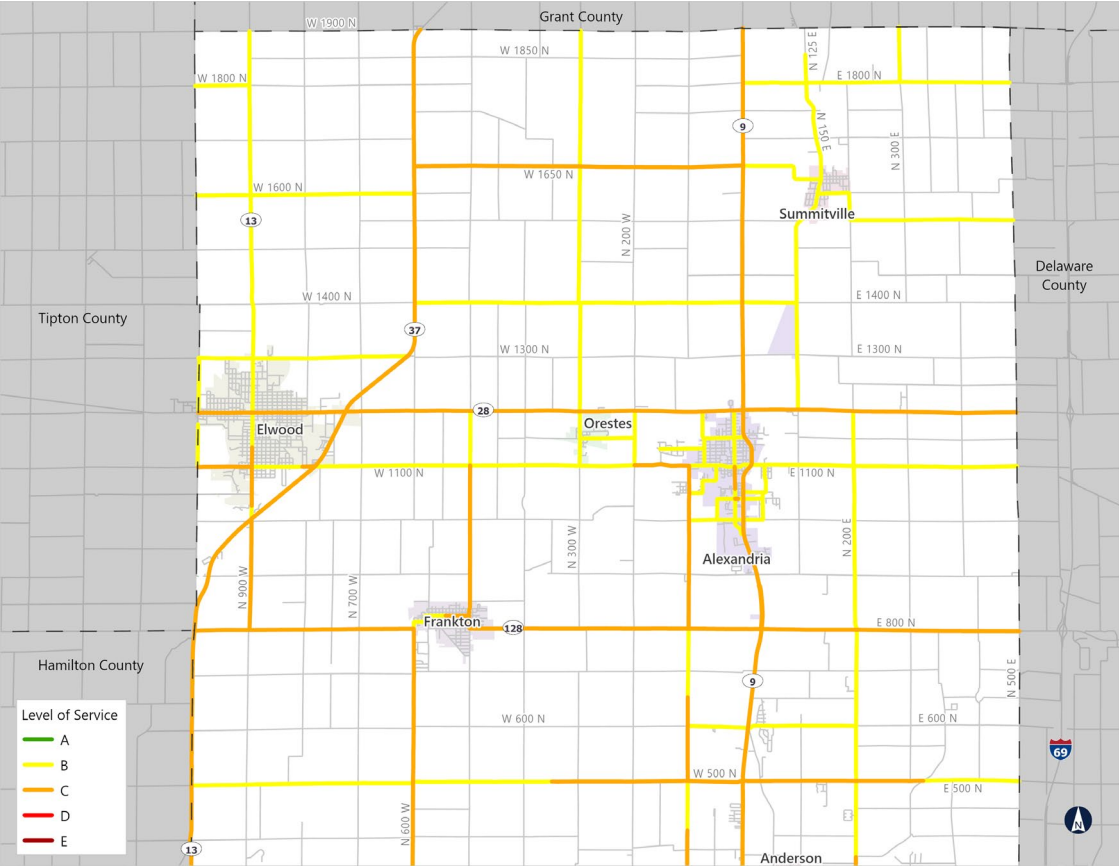
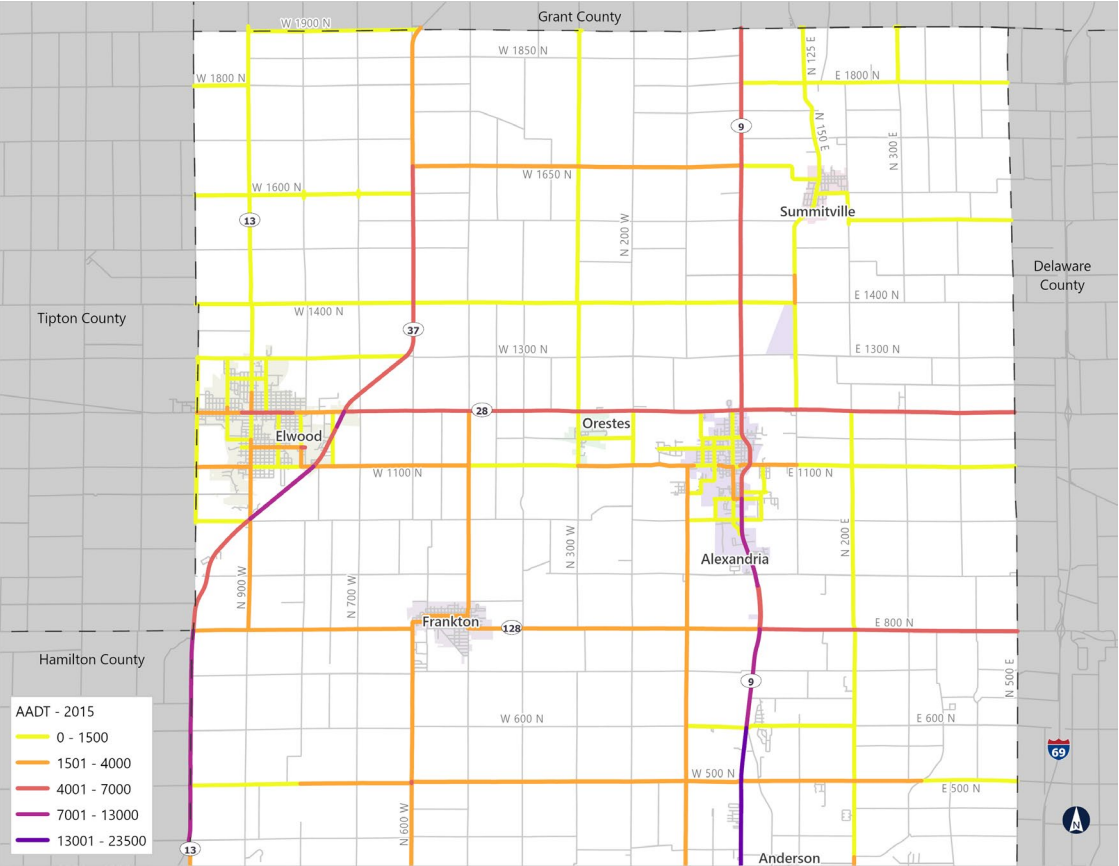
MCCOG has a travel demand model based on demographic and census data which is calibrated to traffic count data. Early in the process of the Thoroughfare Plan process, the decision was made to match MPO model years to make sure any changes made align with the MPO data.

Although the MCCOG model has most major roadways within Madison County, it covers a larger area so it not as detailed. EMCS worked with MCCOG to utilize their base model and added links to match the Thoroughfare Plan study area.

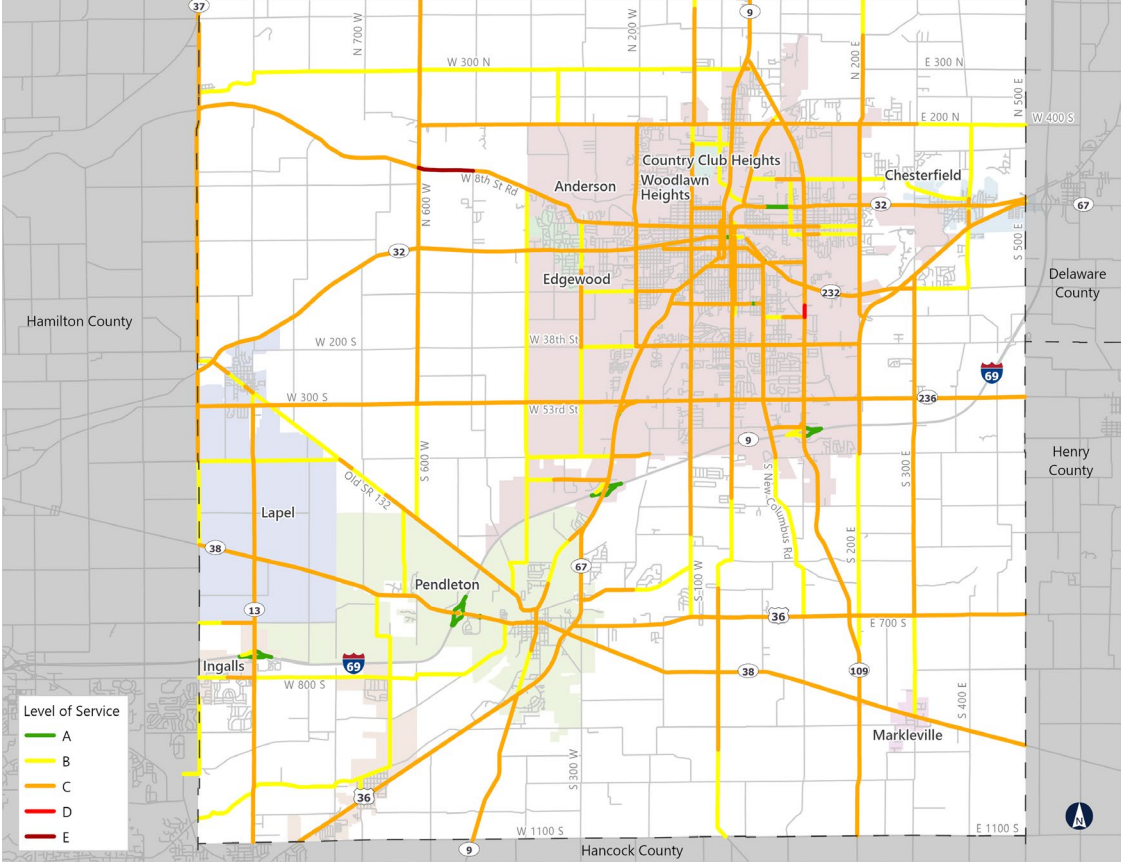
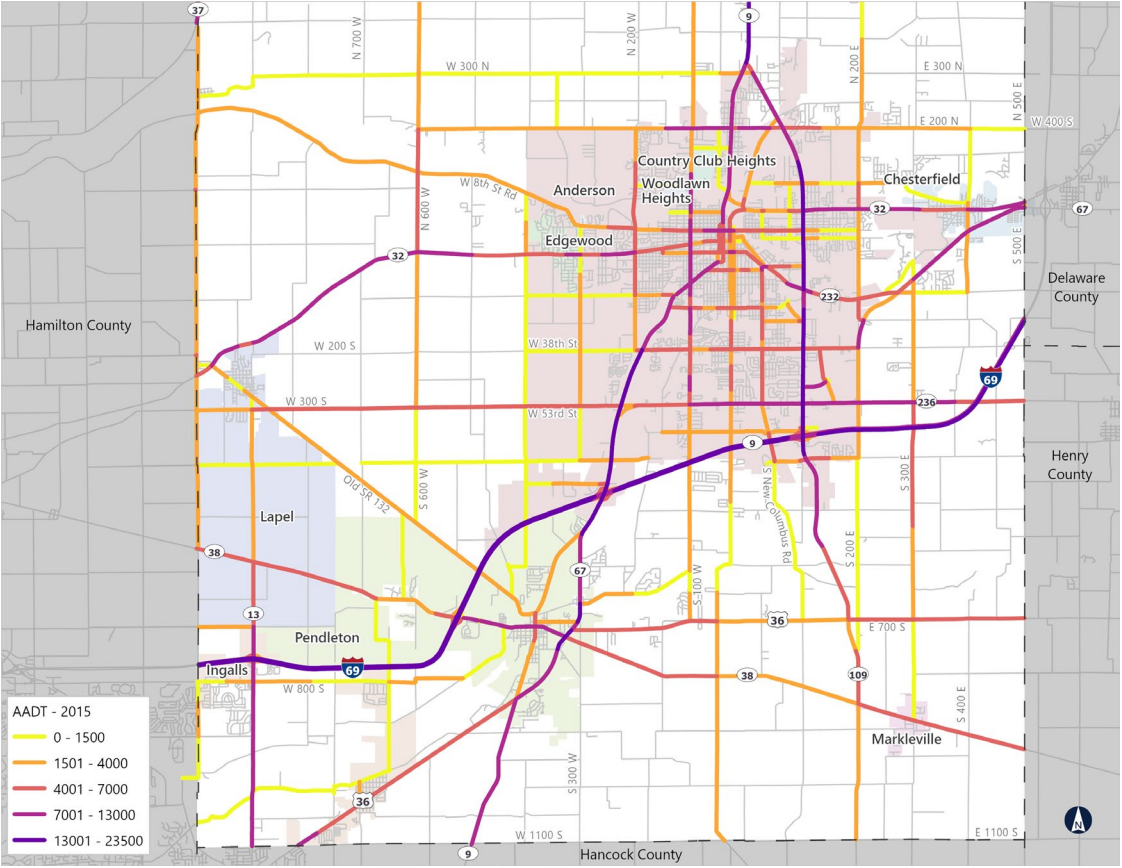
Overall network evaluation and determination of new facilities used daily peak hours. AM peak and PM peak hours were also evaluated to aid with intersection improvements.



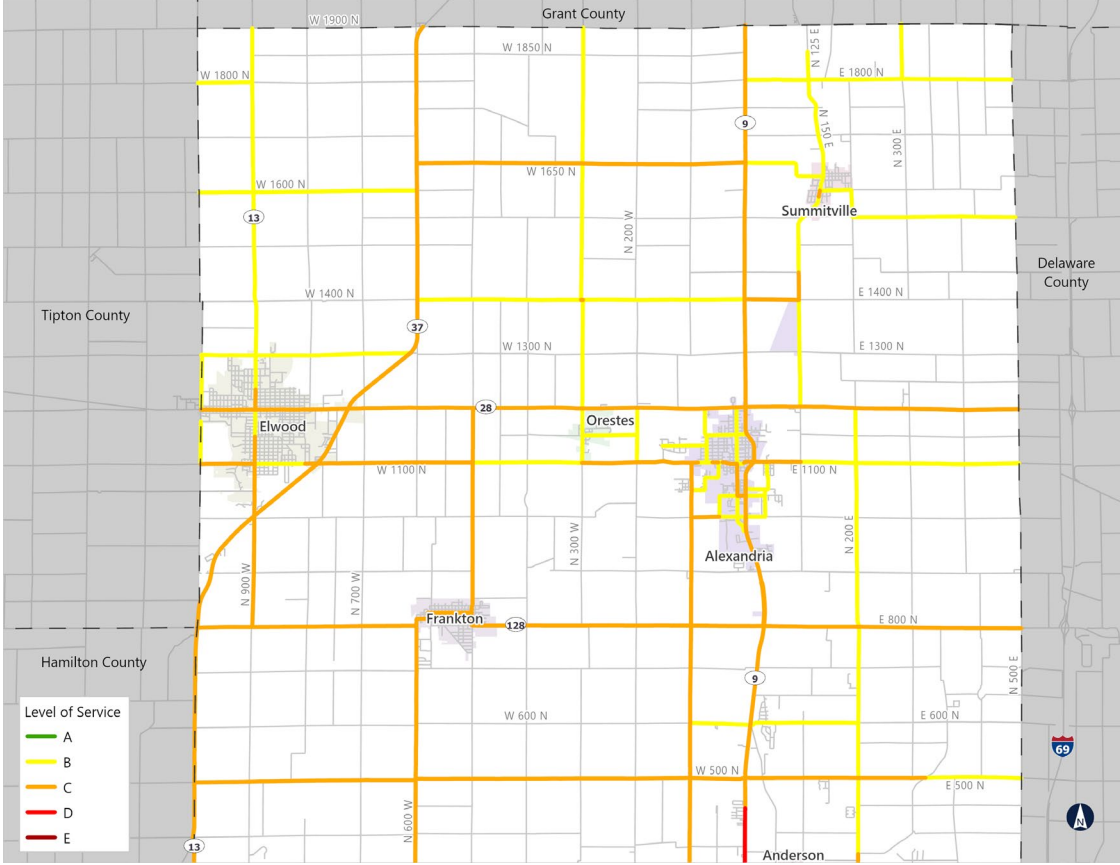
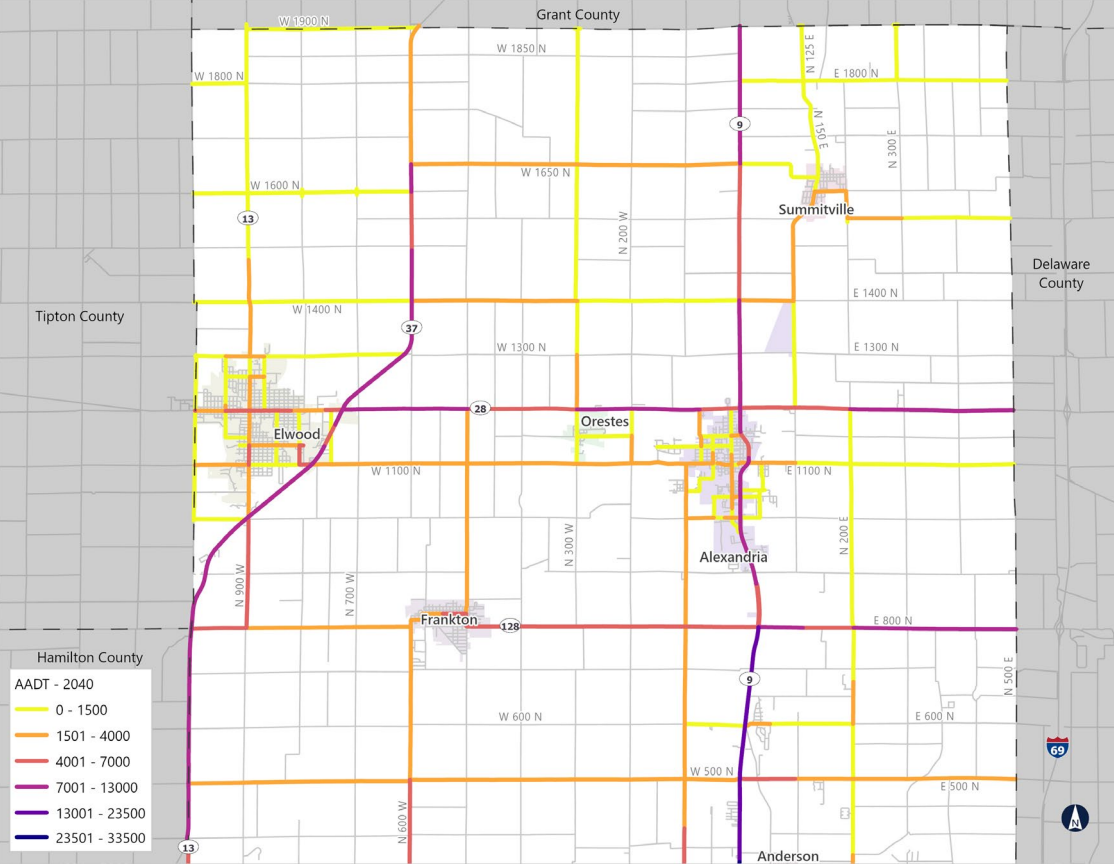
# BASE YEAR FINDINGS - North



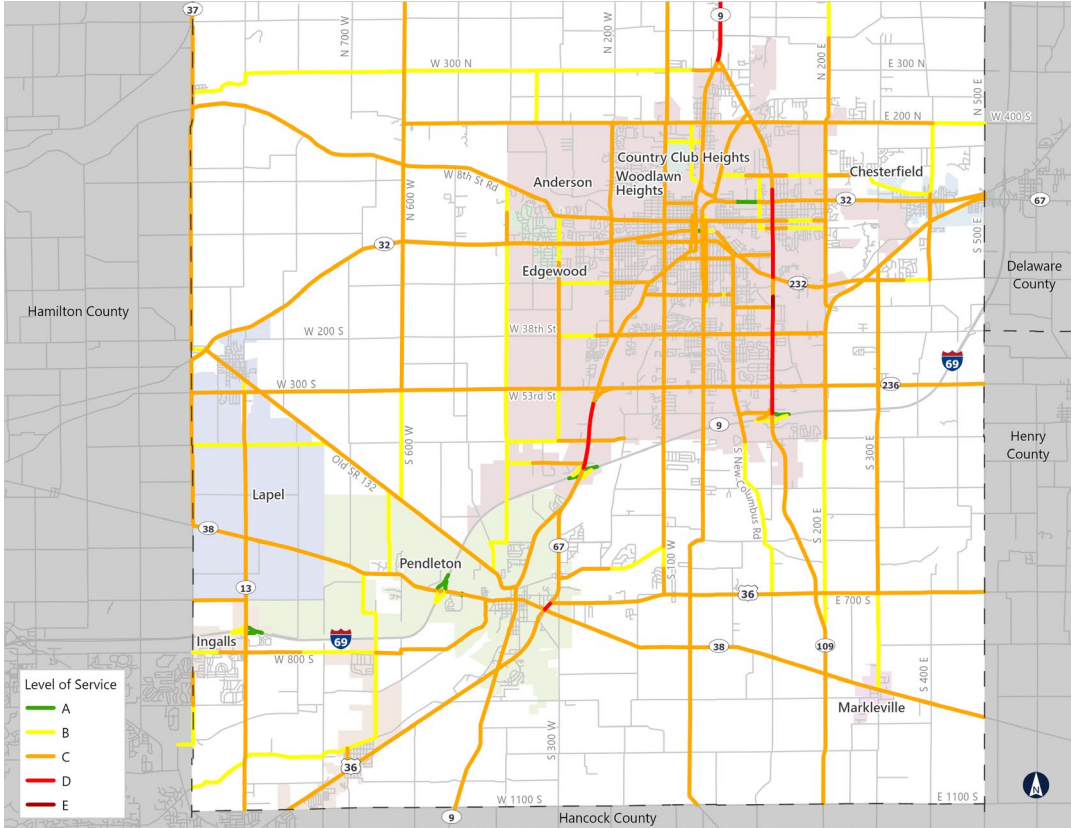
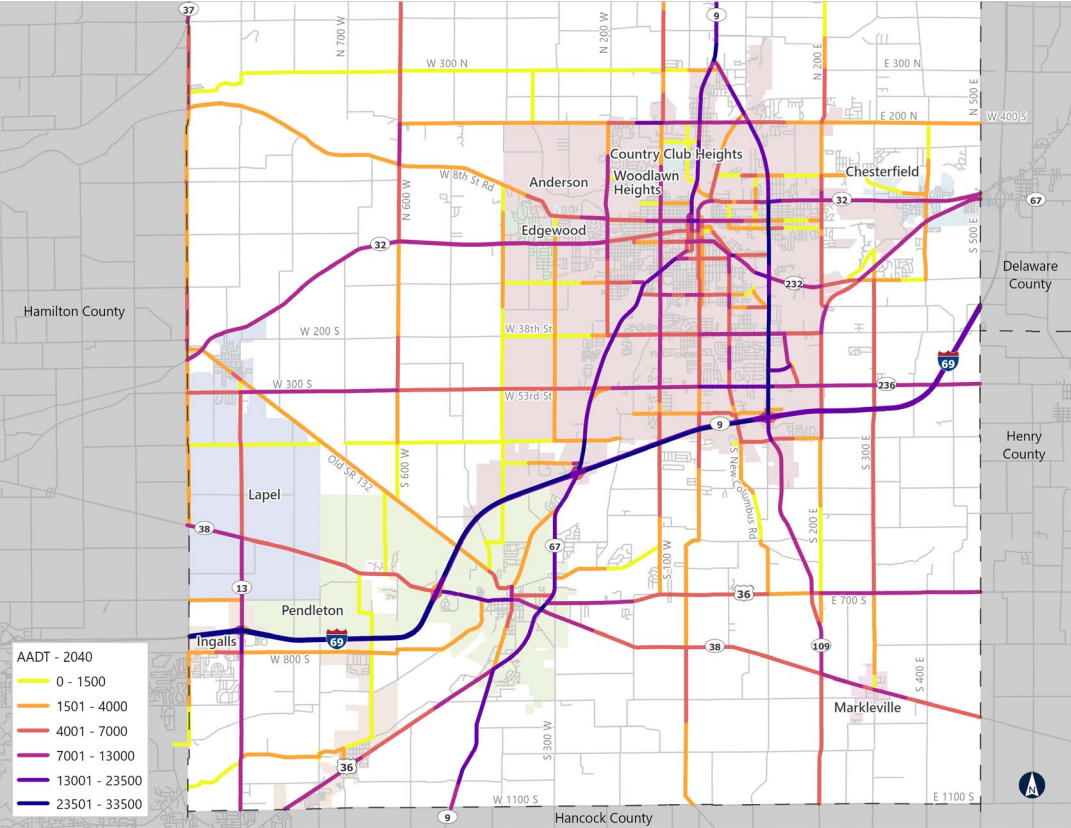
# BASE YEAR FINDINGS - South



# DESIGN YEAR FINDINGS - North



# DESIGN YEAR FINDINGS - South



# HIGH LEVEL IMPROVEMENTS

## Potential New Connections

- N 600 W from Frankton to SR 37
- CR 200

## Intersections:

- SR 67 & SR 38
- SR 9 & SR 236

## Improvements – General:

- Widen existing roadways to appropriate lane and segment widths. Add lanes and connections only where necessary



# GOALS AND OBJECTIVES



# GOALS FOR MADISON COUNTY

Guiding Principle	Associated Goal for Madison County
Safety	Increase safety for all users of the Madison County Transportation Network.
Connectivity	Improve connectivity of local and regional transportation networks.
Economics	Enhance the transportation network to support agriculture and boost regional economic development opportunities.
Capacity	Invest in maintenance and redesign of roadways to accommodate growth and development.
Coordination	Continue to foster local and regional partnerships to implement needed transportation initiatives.

# OBJECTIVES FOR MADISON COUNTY

- **Safety: Increase safety for all users of the Madison County Transportation Network.**
  - Use Protect 2030 Safety Action Plan to prioritize improvements at the most hazardous intersections and thoroughfares.
  - Maintain sufficient right-of-way to allow for safe and efficient transport of agricultural equipment, school buses, emergency vehicles, and semi-trucks.
  - Require new developments to implement appropriate traffic calming designs.

# OBJECTIVES FOR MADISON COUNTY

- **Connectivity: Improve connectivity of local and regional transportation networks.**
  - Support increased connectivity between communities in southwest Madison County by providing more complete route options.
  - Boost regional connectivity by ensuring quick access to Interstate 69 from anywhere in Madison County.
  - Expand the bicycle and pedestrian network to increase regional, non-motorized transportation options in Madison County.
  - Implement the Complete Streets policy to provide a safe, efficient, complete, and well-connected transportation network in Madison County.

# OBJECTIVES FOR MADISON COUNTY

- **Economics: Enhance the transportation network to support agriculture and boost regional economic development opportunities.**
  - Prioritize future projects based on their potential to boost economic vitality and quality of life throughout Madison County.
  - Identify roadways with high truck traffic volumes and plan infrastructure to safely handle heavy loads.
  - Explore opportunities for future interchanges where appropriate.
  - Ensure that future land use plans consider changes in the transportation network, including new interchanges and roadway additions.
  - Foster a positive first impression of Madison County by encouraging local character at interstate interchanges and along the corridor.
  - Upgrade roadways throughout rural Madison County to accommodate the travel of agricultural vehicles and equipment.

# OBJECTIVES FOR MADISON COUNTY

- **Capacity: Invest in maintenance and redesign of roadways to accommodate growth and development.**
  - Employ access management best practices in appropriate areas as communities grow to preserve the flow of traffic, reduce the frequency of crashes, and improve access to businesses and homes.
  - Maintain sufficient right-of way along county roads so that corridor improvements can accommodate future needs.
  - Reduce congestion on key roadways by fostering a complete transportation network which accommodates all users.

# OBJECTIVES FOR MADISON COUNTY

- **Coordination: Continue to foster local and regional partnerships to implement needed transportation initiatives.**
  - Collaborate with the cities and towns within Madison County to ensure that future transportation plans and projects are in alignment with shared goals.
  - Partner with state, regional, and local jurisdictions to ensure transportation and desired land uses support one another.
  - Coordinate with local utility providers to complete future utility improvements in tandem with transportation improvements.



# NEXT STEPS

# NEXT STEPS

- Steering Committee Meeting 4
  - Review draft plan
  - Finalize project priorities and action steps
- Public Open House
  - Collect feedback on the draft plan
  - Plan Commission, County Commissioners, stakeholders, and representatives from Madison County communities encouraged to attend





**THANK YOU!**